

WHAT IS CLAIMED:

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1 A camera electrical system for use in a family of recyclable cameras each camera having a set of desired electronic functions, the camera electrical system comprising:

a first electronic circuit for performing a first set of electronic function including charging a flash capacitor and discharging the flash capacitor through a flash bulb to cause a flash of artificial light during photography said first electronic circuit having a first set of electrical contacts; and,

more than one second electronic circuit, each second electronic circuit having contacts to engage at least one of the first set of electrical contacts, wherein the first electronic circuit and each of said second electronic circuits are adapted to cooperate in a combined circuit comprising more than one of said second circuits to perform the set of desired camera functions.

2. The camera electrical system of claim 1, wherein each of the plurality of second circuits comprises electrical contacts to engage contacts of other second circuits to permit the second circuits to cooperate.

3. The camera electrical system of claim 1, wherein one of said plurality of second circuits comprises a fatbit recording circuit.

4. The camera electrical system of claim 1, wherein one of said plurality of second circuits comprises an automatic restart circuit.

5. The camera electrical system of claim 1, wherein one of said plurality of second circuits comprises a time out circuit.

6. The camera electronics system of claim 9, wherein the first electronic circuit permits the camera user to manually cause electrical energy to be stored in the flash capacitor.

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7. The camera electronics system of claim 6, wherein the second circuit comprises a charge circuit to automatically cause electrical energy to be stored in a flash capacitor.
8. The camera electronics system of claim 7, wherein at least one of the second electronic circuits of the combined circuit cooperates with at least part of the first electronic circuit and at least one other second circuit to perform the at least one other set of camera functions.
9. The camera electronics system of claim 9, wherein at least one of the second electronic circuits disables at least one of the functions of the first electronic circuit.

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10. The camera electronic system of claim 1, wherein at least one of said plurality second electronic circuits comprises a flex circuit.
11. A camera electronic circuit comprising:
 - a first electronic circuit for performing a first set of electronic operations including charging a flash capacitor and discharging the flash capacitor through a flash tube to cause a flash of light during photography said first electronic circuit having a first set of electrical contacts;
 - a second electronic circuit having a second set of electrical contacts at least one of which engages the first set of electrical contacts, to cause first and second electronic circuits to cooperate to perform a second set of camera functions; and,
 - at least one third electronic circuit each having a third set of electrical contacts, with at least one of the third set of electrical contacts engaging at least one of the first set or second set of contacts to combine the first, second and third electronic circuits so that the combined circuit can perform a third set of camera functions.

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12. The camera electronic system of claim 11, further comprising more than one third electronic circuit with each third electronic circuit adding one function to the set of functions performed by the combined circuit.

13. The camera electronic system of claim 11, wherein at least one of the more than one third electronic circuits prevents the first and second circuits from performing at least one of the second set of camera functions.

14. A single touch flash charging circuit for charging a flash capacitor with potential, the circuit comprising:

a self oscillating circuit including a battery having positive and negative terminals, an oscillation start switch, a transformer having primary and secondary windings and an oscillation transistor having a base terminal and a collector and emitter terminals connected in series with the primary of the transformer, said self oscillating circuit being of the type that operates in response to closure of said oscillation start switch to initiate self-sustaining oscillations in the primary windings of the transformer and which induce an alternating current in the secondary windings which alternating current is applied through a rectifier to raise a potential charge on the flash capacitor;

a shutter sync switch;

a timing capacitor connected to the base of the oscillation transistor and forward biasing the oscillation transistor when a charge is stored in the timing capacitor;

a thyristor connected between the primary of the transformer and the timing capacitor, the thyristor having a control element coupled to the shutter sync switch, which closes when the camera shutter is open, through a blocking diode, so that closure of the shutter sync switch triggers the thyristor into an on state with the thyristor charging the timing capacitor when the thyristor is in the on state;

a charged holding capacitor connected to the control element of the thyristor, with said charge on holding capacitor biasing the control element of the thyristor on until said charge on the holding capacitor depletes to

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provide a charging time for the timing capacitor that is greater than the duration of closure of the shutter sync switch with the thyristor being held in the on state by the holding capacitor while the timing capacitor is charged.

15. The circuit of claim 14, having a resistor coupled between the control element of the thyristor and the charging potential of the flash capacitor.

16. The circuit of claim 14, wherein said thyristor is comprised of two transistors each having a collector and a base wherein the collector of each transistor is connected to the base of the other transistor.

17. The circuit of claim 16, further comprising a light emitting diode connected to the collector of either of the transistors in the thyristor so as to illuminate only while the thyristor is held in the on state by the holding capacitor.

18. A method of assembling a camera electronic system to perform a set of desired functions, the method comprising the steps of:

providing a first camera electronic circuit capable of performing a first set of camera functions said first camera electronic circuit having a first set of electrical contacts;

identifying camera functions that must be added to the first camera electronic circuit to cause the first camera electronic circuit to perform the set of desired functions;

providing a plurality of second electronic circuits each second circuit having contacts to engage at least one of the first set of electrical contacts, wherein each of the second electrical circuits are adapted for combination with the first electronic circuit and with other second electronic circuits to perform a predefined function;

combining the first electronic circuit with at least two of the second electronic circuits selected so that the combined circuit performs a the desired set of camera functions.

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19. The method of claim 18, wherein one of said second electronic circuits in the combination disables at least one of the functions of the first electronic circuit.